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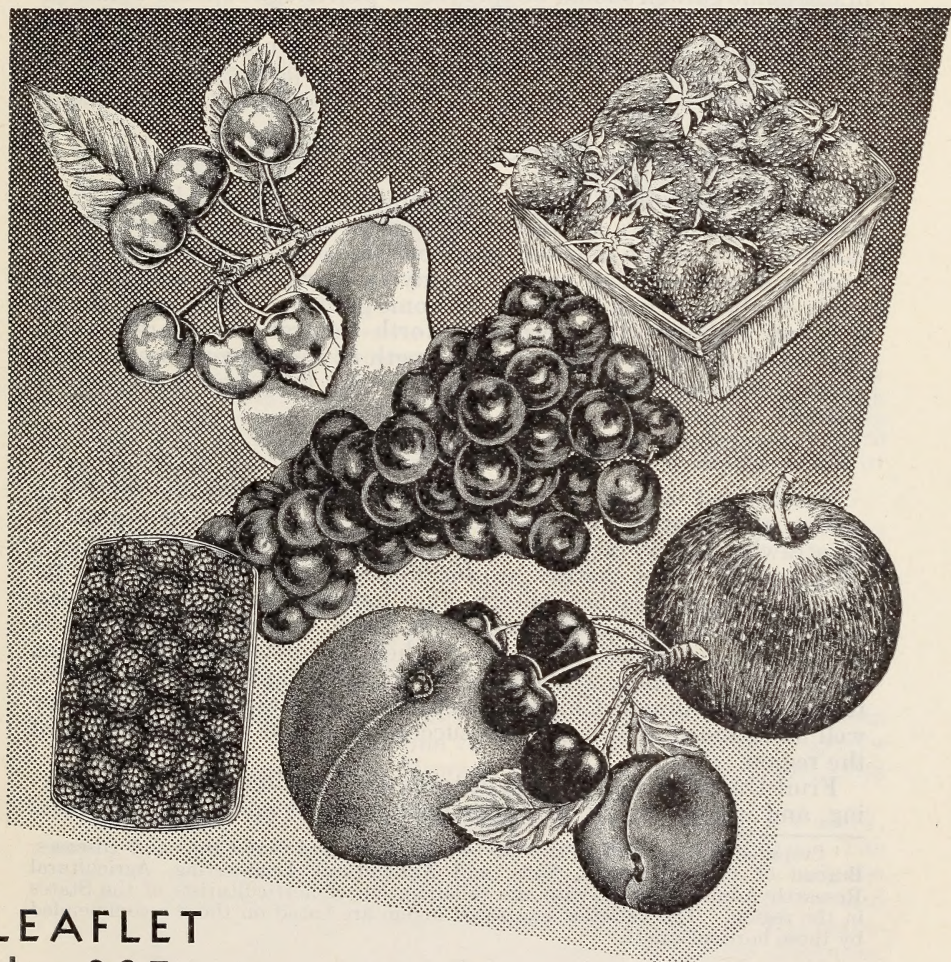
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The Home FRUIT GARDEN

in the
Northeastern and
North Central States

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UNITED STATES DEPARTMENT OF AGRICULTURE

THE HOME FRUIT GARDEN IN THE NORTH-EASTERN AND NORTH CENTRAL STATES¹

In almost every part of this country certain fruits and nuts can be grown successfully in farm or suburban fruit gardens. Fruits that need spraying are not well suited for home production. In all areas, however, fruit trees and bunch grapes are benefited by proper spraying; and, in the vicinity of commercial orchards and vineyards, fruits in the home garden should be sprayed to prevent the spread of insects and diseases. By properly selecting the kinds and varieties of fruit for home planting, a succession of fresh fruit of high dessert quality can be had during much of the summer. Surpluses can be canned, preserved, dried, or in some cases frozen for use during other seasons.

Climatic Districts for Fruits and Nuts

Summer and winter temperatures, rainfall, and prevalence of diseases and insects are all important in determining the varieties that can be grown in the different parts of the country. Although many fruit and nut varieties are not hardy in parts of this region, some kinds can be grown in almost every home garden. On the map shown in figure 1 the Northeastern and North Central States are divided into districts, based chiefly on the length of the growing season. In general, the same fruit and nut varieties can be grown throughout a district.

Kinds and Varieties To Plant

Under most conditions in this region the best fruits for the home garden are, in order of adaptability where spraying is not practiced, (1) strawberries, (2) raspberries, (3) sour cherries, (4) grapes, (5) plums, (6) pears, (7) sweet cherries, (8) blackberries, and (9) apples. Under some conditions peaches, cherry-plum hybrids, and blueberries may be grown. Currants and gooseberries, which succeed well in all parts of the region, should be planted wherever quarantine regulations permit, that is, where white pines are not important. In certain locations black walnuts, Chinese chestnuts, hickories, and filberts may well be included. Sour cherries succeed in all but the coldest part of the region.

Fruit trees and grapes in all districts are benefited by proper spraying, and in the vicinity of commercial orchards and vineyards fruits

¹ Prepared by the staff of the Division of Fruit and Nut Crops and Diseases, Bureau of Plant Industry, Soils, and Agricultural Engineering, Agricultural Research Administration, with the collaboration of horticulturists of the States in the region. The varieties suggested herein are based on those recommended by these horticulturists.

in the home garden should be sprayed to prevent the spread of insects and diseases.

Strawberries are adapted to the greatest number of locations and conditions in this region. They are the first fruit to ripen, are of fine flavor, and are very high in vitamin C content. Even when frozen, strawberries keep most of their vitamin C content for many months. Strawberries should be a part of almost every garden. The everbearing strawberries Superfection and Gem can be grown in all districts of this region.

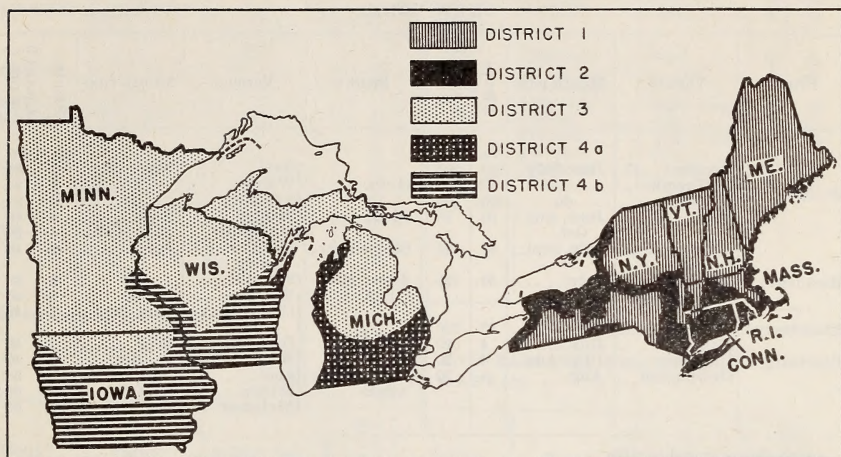


FIGURE 1.—Map of the Northeastern and North Central States. District 1—growing season of 90 to 150 days; moderate summer temperatures; low winter temperatures. District 2—growing season of 150 to 180 days; fairly high summer temperatures or modified by lake or ocean. District 3—growing season of 90 to 150 days; severe winters. District 4a—growing season of 150 to 180 days; fairly high summer temperatures, similar to district 2; district 4b has more severe winters than district 4a.

Red and purple raspberries can be grown in all districts of this region, and black raspberries except in northern Minnesota. Usually it is best not to grow both red and black varieties in the same garden, for cultivated and wild red raspberries often have a virus disease that spreads to black raspberries and quickly kills them. Either of the red raspberries Taylor or Latham (not both) should be grown in district 1. Red raspberries are relatively high in vitamin C.

Strawberries, raspberries, plums, and grapes cover the season from June until frost. More than one variety of some fruits may be grown to extend the season. Thus, Howard 17 (Premier), Catskill, and Gem will furnish strawberries for most of the summer.

In districts 2 and 4 and in the southern parts of districts 1 and 3, more nuts, which are high in food value, may well be planted. The newer named varieties are better than wild seedlings. Good varieties of black walnuts are the Thomas and Ohio, of filberts the Bixby and Buchanan, and of Chinese chestnuts the Carr and Hobson. The planting distances are 40 feet apart for black walnuts, 30 feet for chestnuts, and 15 feet for filberts. Filberts can be grown wherever peaches are hardy. The black walnut may be used as a shade tree, especially in the milder parts of the region.

The varieties recommended for medium-sized gardens in the different districts are listed in table 1. Some of the varieties suggested are different from those grown in commercial plantings. Two or more varieties of sweet cherries, some plums, pears, apples, blueberries, black walnuts, filberts, and Chinese chestnuts must be planted to insure pollination.

TABLE 1.—*Varities suggested for medium-sized gardens in representative parts of the districts of figure 1*

DISTRICT 1 (NORTHERN NEW ENGLAND AND MUCH OF EASTERN AND SOUTHERN NEW YORK)

Fruit ¹	Variety	Month ripe	Plants	Length of row ²	Fruit ¹	Variety	Month ripe	Plants	Length of row ²
Strawberry	Howard 17 (Premier).	June-July	No. 100	Ft. 200	Grape ³	Beta	Sept.-Oct.	No. 3	Ft. 24
	Catskill	do	100	200		Worden	do	3	24
	Gem	June, Aug.-Oct.	50	75		Fredonia	do	3	24
	Durham (red).	July, Sept.	50	125	Plum	Shropshire	Sept.-Oct.	4	60
Raspberry	Taylor (red) or Latham (red).	July	50	125	Sour cherry	Montmorency.	July	2	40
Blackberry ³	Eldorado	July-Aug.	25	100	Sweet cherry ³	Schmidt	do	2	40
Blueberry ³	Stanley	July	4	20		Windsor	do	2	40
	Berkeley	July-Aug.	4	20		Clapp Favorite.	Aug.-Sept.	2	40
	Burlington	Aug.	4	20	Pear ³	Bartlett	Sept.	2	40
						Bosc	do	2	40
					Apple	Lodi	Aug.	2	60
						Milton	Sept.	2	60
						McIntosh	Oct.	2	60

See footnotes at end of table.

DISTRICT 2 (SOUTHERN NEW ENGLAND AND RIVER VALLEY AND LAKE PARTS OF NEW YORK)

Fruit ¹	Variety	Month ripe	Plants	Length of row ²	Fruit ¹	Variety	Month ripe	Plants	Length of row ²
Strawberry	Howard 17 (Premier).	June	No. 100	Ft. 200	Peach ³	Mikado	Aug.	No. 2	Ft. 40
	Catskill or Fairfax	do	100	200		Golden Jubilee	Aug.-Sept.	2	40
	Gem	June, Aug.-Oct.	100	150		Halehaven	Sept.	2	40
	Taylor (red).	July	50	125	Sour cherry	Elberta	do	2	40
Raspberry	Bristol (black).	do	25	100		Montmorency.	June-July	2	40
	Dundee (black).	do	25	100		Black Tartarian.	do	2	40
	Sodus (purple).	do	25	100	Sweet cherry	Windsor	do	2	40
Blackberry	Eldorado	July-Aug.	25	100		Bartlett or Gorham.	Sept.	2	40
Blueberry	Stanley	July	4	20		Seckel	do	2	40
	Berkeley	do	4	20		Bosc	Sept.-Oct.	2	40
	Coville	Aug.	4	20		Lodi	Aug.	1	30
Grape	Fredonia	Aug.-Sept.	3	24	Apple	Milton	Sept.	2	60
	Worden	Sept.	3	24		McIntosh	Sept.-Oct.	2	60
	Concord	do	3	24		Northern Spy.	Oct.	2	60
Plum	Niagara	do	3	24		Golden Delicious.	do	2	60
	Beauty	July	2	30					
	Abundance	Aug.-Sept.	2	30					
	Stanley	Sept.	2	30					
	Shropshire	do	2	30					

See footnotes at end of table.

TABLE 1.—Varieties suggested for medium-sized gardens in representative parts of the districts of figure 1—Continued

DISTRICT 3 (NORTHERN AND CENTRAL MICHIGAN, NORTHERN AND CENTRAL WISCONSIN, MOST OF MINNESOTA, AND PARTS OF NORTHERN IOWA)

Fruit ¹	Variety	Month ripe	Plants	Length of row ²	Fruit ¹	Variety	Month ripe	Plants	Length of row ²
			No.	Ft.				No.	Ft.
Strawberry.	Howard 17 (Premier).	June-July	100	200	Cherry.	Northstar	July	2	20
	Beaver	do.	100	200		Sapalta	Aug.	2	20
	Gem	June, Aug.-Sept.	50	75	Cherry-plum hybrid.				
Raspberry.	Chief (red)	July	50	125		Bantam	Sept.	2	40
	Latham (red).	do.	50	125		Flemish Beauty. ³	do.	2	40
Currant ⁴	Red Lake	do.	10	40	Pear	Mendel	Sept.-Oct.	2	40
Gooseberry ⁴	Pixwell	do.	5	20		Oriole	Aug.	1	30
	Beta	Sept.	3	24		Beacon	Aug.-Sept.	1	30
Grape	Red Amber	do.	3	24	Apple	Minjon	Oct.	2	60
	Moonbeam	do.	3	24		Haralson	do.	4	120
	Bluebell	do.	3	24		Dolgo	Sept.	2	40
Plum	Underwood	Aug.-Sept.	3	60					
	Redglow	do.	3	60					
	Toka	do.	1	20					
	South Dakota.	do.	3	60					

See footnotes at end of table.

DISTRICT 4a (SOUTHERN MICHIGAN AND EASTERN WISCONSIN (STURGEON BAY AREA))

Fruit ¹	Variety	Month ripe	Plants	Length of row ²	Fruit ¹	Variety	Month ripe	Plants	Length of row ²
			No.	Ft.				No.	Ft.
Strawberry.	Howard 17 (Premier).	June	100	200	Sweet cherry.	Black Tartarian.	June	1	20
	Robinson	do.	100	200		Schmidt	do.	1	20
	Gem	June, July-Oct.	100	150		Windsor	do.	1	20
Raspberry.	Chief (red)	June-July	50	125	Sour cherry.	Montmorency.	July	2	40
	Latham (red).	do.	50	125		Redhaven	Aug.	2	40
Currant ⁴	Red Lake	do.	10	40		Fairhaven	do.	2	40
Gooseberry ⁴	Poorman	July	5	20	Peach	Halehaven	do.	2	40
	Portland	Aug.-Sept.	3	24		Elberta	Sept.	2	40
Grape ⁵	Fredonia	do.	3	24		Bartlett	do.	2	40
	Worden	Sept.	3	24	Pear	Seckel	do.	2	40
	Niagara	do.	3	24		Conference	Sept.-Oct.	2	40
Blueberry ⁶	Concord	do.	3	24		Melba	Aug.	2	60
	Stanley	July	4	20	Apple	Wealthy	Sept.	2	60
	Berkeley	do.	4	20		McIntosh	Sept.-Oct.	2	60
Blackberry ⁶	Coville	Aug.	4	20		Jonathan	do.	2	60
	Eldorado	do.	25	100	Crab apple	Steele Red	Oct.	2	60
Plum	Stanley	Sept.	1	15		Dolgo	Aug.-Sept.	2	40
	Italian	do.	1	15					
	Prune.	do.	1	15					
	Shropshire	do.	1	15					

See footnotes at end of table,

TABLE 1.—*Varieties suggested for medium-sized gardens in representative parts of the districts of figure 1—Continued*

DISTRICT 4b (PART OF SOUTHEASTERN MINNESOTA, SOUTHERN WISCONSIN, AND MOST OF IOWA)

Fruit ¹	Variety	Month ripe	Plants	Length of row ²	Fruit ¹	Variety	Month ripe	Plants	Length of row ²
Strawberry	Howard 17 (Premier)	June	100	200	Cherry-plum hybrids	Compass	Aug	2	20
	Beaver	do	100	200		Opata	do	2	20
	Superfection	June-July	100	150		Sapa	do	2	20
		Oct.				Montmo-rency ⁷	July	2	30
Raspberry	Chief (red)	June-July	50	125	Pear	Northstar	do	2	30
	Latham (red)	July	50	125		Lincoln ⁷	Sept.	1	20
	Sodus (purple)	do	20	100		Seckel ⁷	do	1	20
Currant	Red Lake	June-July	10	40		Patten	Sept.-Oct.	2	40
Gooseberry	Pixwell	do	5	20	Apple	Melba	Aug.	1	30
	Poorman	July	5	20		Beacon	do	1	30
Grape	Portland	Aug.-Sept.	2	16		Wealthy	Sept.	1	30
	Fredonia	do	2	16		Sharon	Sept.-Oct.	1	30
	Worden	Sept.	2	16		Secor ⁷	do	1	30
	Niagara	do	2	16		Joan ⁷	do	1	30
	Concord	do	2	16		Haralson	do	1	
Plum	Underwood	Aug.-Sept.	2	40		Jonathan ⁷	do	1	30
	Ember	Sept.	2	40		Hawkeye	do	1	30
	Toka	do	2	40	Crab apple	Greening	do		
	South Dakota	do	2	40		Dolgo	Aug.-Sept.	1	30
	Stanley ³	do	2	30					

¹ Two or more varieties of blueberries, apples, some plums, sweet cherries, and pears are necessary to insure pollination and fruit set. Seckel and Bartlett pears will not pollinate each other.

² Or distance between trees.

³ In favorable locations only.

⁴ Grow only where white pines are not important.

⁵ Winter protection advisable in exposed location.

⁶ Michigan only.

⁷ Southern part only.

Planting and Care

SOURCES OF PLANTS.—Fruits adapted to this region are propagated by commercial nurserymen, who are generally dependable sources of fruit varieties. Names of nurseries can be supplied by the State agricultural extension services.

LOCATION OF PLANTING.—Although it is generally desirable to have the planting near the house and perhaps adjacent to the vegetable garden, this may not be the most favorable location. The planting should not be in a low or frosty area but on moderately elevated land or on a slope that will provide satisfactory air drainage. The soil should be reasonably fertile and well drained. A location where the soil tends to remain wet after rain should be avoided. Fruit trees should not be planted near wood lots or shade trees, since full exposure to sunlight is needed.

SIZE OF PLANTING.—The size of the planting is determined by the available space, by the needs of the family, and by the kinds of fruit that can be grown. Most small gardens (10 by 50 feet to 30 by 50 feet) should consist mostly of berries and grapes. A half-acre garden that includes fruit and nut trees will furnish fruit in season for a large family (fig. 2).

WHEN TO PLANT.—In the northern districts usually a better stand of trees and plants is obtained by setting them as early in the spring as possible. It is important that the plants be dormant.

HOW TO PLANT.—Prepare the ground as thoroughly as for a vegetable garden. Do not allow the roots of plants to dry out. Set berries

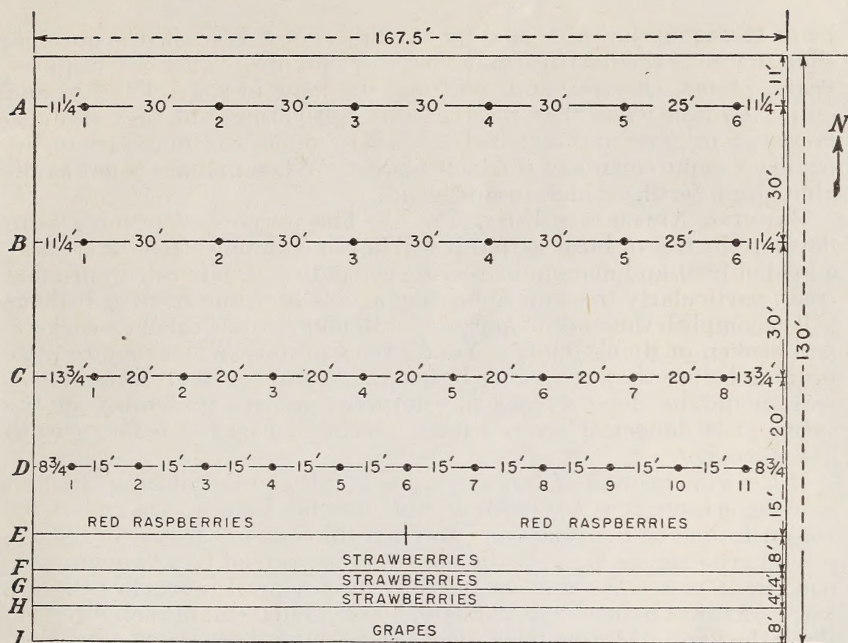


FIGURE 2.—Suggested arrangement for a half-acre fruit garden. Rows A and B—Nos. 1 to 5, apples; No. 6, sweet cherry. Row C—Nos. 1 to 5, pears; Nos. 6 to 8, sweet cherries. Row D—Nos. 1 to 9, plums; Nos. 10 and 11, sour cherries. Row E—red raspberries (2 varieties). Rows F to H—strawberries (3 varieties). Row I—grapes (trained on a wire trellis or on a fence used as a trellis). The fruit trees should be placed on the north side, if possible, to avoid shading of the small fruits.

and grapes at the same depth as they grew in the nursery and fruit and nut trees slightly deeper. Spread out the roots when setting the trees or plants. Separate the topsoil and subsoil when digging the holes. Place the topsoil about the roots, and fill up the hole with the subsoil. Thoroughly firm the soil about the roots to prevent drying out and to help hold the tree in position.

PRUNING BEFORE PLANTING.—Pick off all fully developed leaves before planting strawberries. Cut back blackberry and raspberry canes to 6 inches. Grapevines are usually cut back to one or two buds. If fruit trees are unbranched whips, head them back to a height of 3 to 3 1/2 feet. If they have several good-sized branches well spaced along the trunk, three or four may be left. The branches should be spaced about a foot apart up and down the trunk and should point in different directions.

CULTIVATION.—The cultivation of the home fruit garden is similar to that of the vegetable garden for the first part of the season. After about September 1 cultivation of fruit trees, vines, and bushes should cease. Cultivate strawberries until the end of the growing season. Under most conditions the same methods of maintaining the fertility of the soil that are followed in a vegetable garden are successful with fruit. Where stable manure is available, its liberal use generally gives excellent results.

All berry plants should be given clean cultivation unless there is an abundance of straw or other material to furnish a permanent mulch.

Fruit trees may be cultivated for the first 3 or 4 years if it is not possible to mulch them with straw or strawy manure. Thereafter apples, pears, plums, cherries, and nuts may be kept in sod. Peaches and grapes do best when they receive some cultivation, but they can also be grown in grass and mulched. Manure mulch will take care of the fertilizer requirements of the fruit plants. When manure is not available, use a fertilizer high in nitrogen.

PRUNING AFTER THE FIRST YEAR.—The purpose of pruning is to develop the tree or bush so that it will have maximum strength to carry a load of fruit and maximum bearing capacity. A safe rule in pruning trees, particularly trees up to bearing age, is to prune them as little as will accomplish this specific purpose. Remove cross branches, suckers, and broken or dying limbs. Young trees of most fruits require little pruning before they come into bearing. Pruning of fruit trees in general should be done during the dormant season, preferably in the spring after danger of severe winter freezing is past but before growth has started.

If the vine growth of bunch grapes is rather weak during the first growing season, it is advisable to cut the vine back at the end of the season to one or two buds and to train up a strong trunk during the second growing season. If the vine is to be trained to a two-wire system, tie it to a stake and let it grow upright until it reaches the top wire. At that point pinch it off and lead out a lateral in each direction along the wire. During the second season, lateral canes will grow from all the buds along the trunk. Select two of these at the height of the first wire above the ground and tie them to that wire to develop fruiting wood. Rub off or pinch back the other branches along the trunk during the growing season. A vine can be trained to a fence in much the same manner.

Prune while the vines are in a dormant condition. As the fruit is borne on shoots from the canes of the previous season's growth, it is important that enough new wood be saved to provide for the next summer's crop. With healthy, vigorous vines, from 50 to 60 buds will produce as much fruit as the vine can mature properly. More wood may be left on vines for home production, provided sufficient space is available for the vine to develop. With vigorous vines, leaving more wood may result in a greater total quantity of fruit, but the individual bunches may be inferior in size and the fruit of poorer quality.

Except in the mountain region remove all the canes from blackberries, both old and new, after the fruit has been picked. New canes will then develop strong growth to produce fruit for the following season. The tips of new shoots of black raspberries are pinched off at a height of 12 to 18 inches, and those of purple raspberries and blackberries at 18 to 24 inches. Red raspberries are not cut back, but the weak canes should be removed. Winter pruning of purple raspberries and of blackberries consists in cutting back lateral branches to about 12 inches and of black raspberries to 8 to 10 inches.

SPRAYING.—For those who find it possible to spray in order to produce the best quality of tree fruits and grapes, the State agricultural colleges can furnish spray programs giving details of sprays and times of application.

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